Loyola University Chicago
Department of Mathematics and Statistics
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Kejin Wu

Assistant Professor

Research Interests: Sampling methods • Model-free bootstrap & Scalable subsampling; Time series analysis • Pertinent prediction inference; Computational statistics • Uncertainty quantification & Prediction inference of financial data

Education

Ph.D. in Statistics, University of California San Diego	2021-2025
M.S. in Statistics, University of California San Diego	2019-2021
Exchange student, University of Queensland	2018
B.S. in Mathematics and Applied Mathematics, Chongqing University	2015-2019

Appointments

Assistant Professor, Loyola University Chicago	2025 - now
Associate Instructor, University of California San Diego	2024 Spring
Associate Instructor, University of California San Diego	2023 Fall
Research Assistant, University of California San Diego	2021 Summer
Teaching Assistant, University of California San Diego	2021-2025

Submitted and Working Manuscripts

Wu, K. and Politis, D.N., Calibration Prediction Interval for Non-parametric Regression and Neural Networks. *(Submitted to Journal of Machine Learning Research)* (Paper Link)

Wu, K. and Politis, D.N., Deep Limit Model-free Prediction in Regression. *(Submitted to ACM/IMS Journal of Data Science)* (Paper Link)

Ryan, O., **Wu, K.** and Jacobson, N.C., Exploratory Continuous-Time Modeling (expct): Extracting Dynamic Features from Irregularly Spaced Time Series. *(Under working)*

Wu, K., McFadden, J.R. and Jacobson, N.C., Determining Timing Effects of Microrandomized Trials Using Intensive Longitudinal Data and The Differential Time-varying Effect Model. *(Under working)* (Paper Link)

Publications

Wu, K., Karmakar, S. and Gupta, R., GARCHX-NoVaS: A Model-free Approach to Incorporate Exogenous Variables. *Journal of Forecasting*, 2025. (Paper Link)

Wu, K. and Politis, D.N., Scalable Subsampling Inference of Deep Neural Networks. *ACM/IMS Journal of Data Science* 2025, 2(1), 1-29. (Paper Link)

Wu, K. and Politis, D.N., Bootstrap Prediction Inference of Nonlinear Autoregressive Models, *Journal of Time Series Analysis* 2024, 45, 800-822. (Paper Link)

Wu, K., Gupta, R., Pierdzioch, C. and Karmakar, S., Climate Risks and Stock Market Volatility over A Century in An Emerging Market Economy: The Case of South Africa.*Climate* 2024, 12(5), 68. (Paper Link)

Politis, D.N. and **Wu, K.**, Non-parametric Forward Bootstrap on Predicting Non-linear Time Series: Consistency, Pertinence and Debiasing, *Stats* 2023, 6(3), 839-867. (Paper Link)

Wu, K. and Karmakar, S., A Model-free Approach to Do Long-term Volatility Forecasting and Its Variants, *Financial Innovation* 2023, 9(59). (Paper Link)

Wu, K. and Karmakar, S., Model-Free Time-aggregated Predictions for Econometric Datasets, *Forecasting* 2021, 3(4), 920-933. (Paper Link)

Teaching

Assistant Professor, Loyola University Chicago

STAT 308: Applied Regression Analysis	2026 Spring
DSCI 101: Fundamentals of Modern Data Science with R	2026 Spring
STAT 308: Applied Regression Analysis	2025 Fall
DSCI 101: Fundamentals of Modern Data Science with R	2025 Fall

Associate Instructor, University of California, San Diego

MATH 11: Calculus-Based Introductory Probability and Statistics	2024 Spring
MATH 11: Calculus-Based Introductory Probability and Statistics	2023 Fall
MATH 10A: Calculus I	2023 Summer

Teaching Assistant, University of California, San Diego 2021 - 2024

MATH 287A: Time Series Analysis
MATH 281C: Mathematical Statistics
MATH 189: Exploratory Data Analysis and Inference
MATH 183: Statistical Methods
MATH 181A: Introduction to Mathematical Statistics I
MATH 181B: Introduction to Mathematical Statistics II
MATH 180A: Introduction to Probability

MATH 180B: Introduction to Stochastic Processes I
MATH 180C: Introduction to Stochastic Processes II
MATH 170A: Introduction to Numerical Analysis: Linear Algebra
MATH 11: Calculus-Based Introductory Probability and Statistics

Conferences

IMS International Conference on Statistics and Data Science (ICSDS) Conference, Seville, Spain, Deep Limit Model Free Prediction in Regression, talk. 2025
NBER-NSF Time Series Conference, Rutgers University, U.S.A., Types of Distribution-free Methods for Forecasting Financial Volatility, poster. 2025
NBER-NSF Time Series Conference, Rutgers University, U.S.A., Bootstrap Prediction Inference of Non-linear Autoregressive Models, co-authored talk. 2025
Workshop on Statistical Frontiers in LLMs and Foundation Models—NeurIPS, Vancouver, Canada, Deep Limit Model-free Prediction, poster. 2024
Workshop on Statistical Frontiers in LLMs and Foundation Models—NeurIPS, Vancouver, Canada, Subsampling on Deep Neural Networks, poster. 2024
Computational and Methodological Statistics (CMStatistics), virtual, Extracting Dynamic Features from Irregularly Spaced Time Series, co-authored talk. 2022

Fellowship, Honor, Award & Funding

Start-up Funding, Loyola University Chicago 2025
Research and Professional Development Funding, Loyola University Chicago 2025
Libby Graduate Research Award, University of California San Diego 2022
James B. Ax Graduate Fellowship, University of California San Diego 2021-2023
Pioneer Scholarship, Chongqing University 2019
Outstanding Student of Chongqing, direct-administered municipality in China 2019
Zhentai Scholarship and Moral scholarship, Chongqing University 2018
The Mathematical Contest in Modeling (MCM), COMAP, Meritorious Winner 2018
Scholarship for Excellent Student, Chongqing University 2017
Mathematics Competition of Chinese College Students, First Prize in Chongqing 2016

Services

Journal reviewers
Journal of Time Series Analysis; Statistics and Computing; Mathematics and Computers in Simulation; Journal of Systems Science and Information; International Review of Economics and Finance; Fudan Journal of the Humanities and Social Sciences; International

Journal of Data Science and Analytics; Scientific Reports; Stats; Future Internet.

Mentor

UCSD Math department mentorship program

R Package

expct: Estimate auto- and cross-correlations from irregularly spaced time series, with Prof. Ryan (Github)